

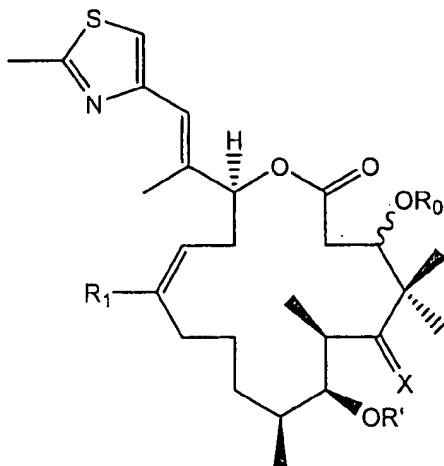
Amendments to the Claims

The following Listing of the Claims replaces all prior versions, and listings, of the claims in this application:

Listing of Claims:

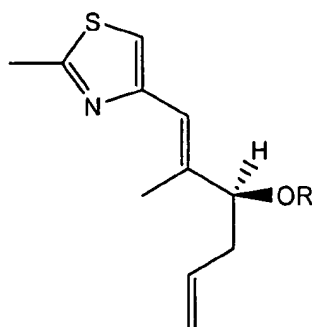
1-26. (Canceled)

27. (Previously presented) A method of preparing an epothilone precursor having the structure:

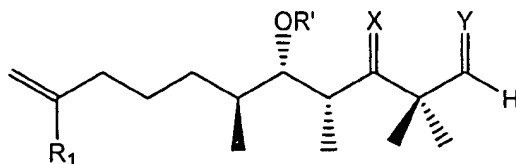


wherein R_1 is hydrogen or methyl; wherein X is O, or a hydrogen and OR'' , each singly bonded to carbon; and wherein R_0 , R' and R'' are independently hydrogen, a linear or branched alkyl, substituted or unsubstituted aryl or benzyl, trialkylsilyl, dialkylarylsilyl, alkyl diarylsilyl, a linear or branched acyl, substituted or unsubstituted aroyl or benzoyl, which comprises

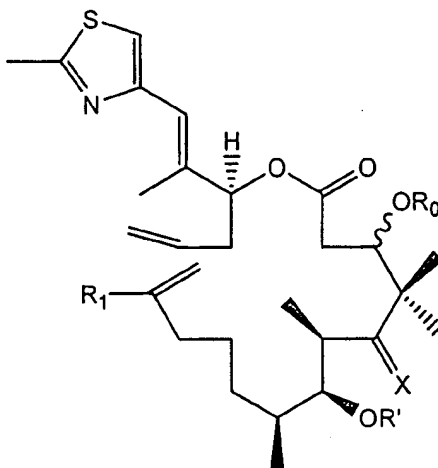
(a) coupling a compound having the structure:



wherein R is an acetyl, with an aldehyde having the structure:



wherein Y is oxygen, under suitable conditions to form an aldol intermediate and optionally protecting the aldol intermediate under suitable conditions to form an acyclic ~~epothilone precursor~~ epothilone precursor having the structure:

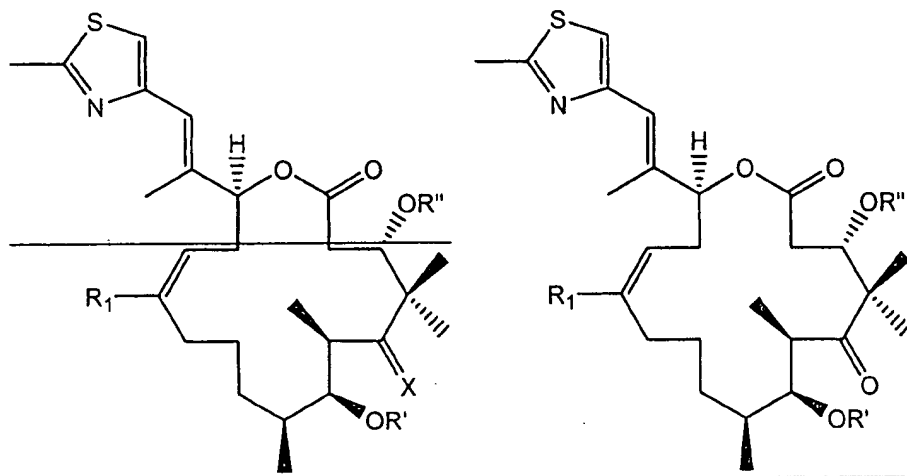


(b) ~~subjecting the acyclic~~ subjecting the acyclic epothilone precursor to conditions leading to intramolecular olefin metathesis to form the epothilone precursor.

28. (Original) The method of claim 27 wherein the conditions leading to intramolecular olefin metathesis require the presence of an organometallic catalyst.
29. (Original) The method of claim 27 wherein the catalyst is a Ru or Mo complex.

30-36. (Canceled)

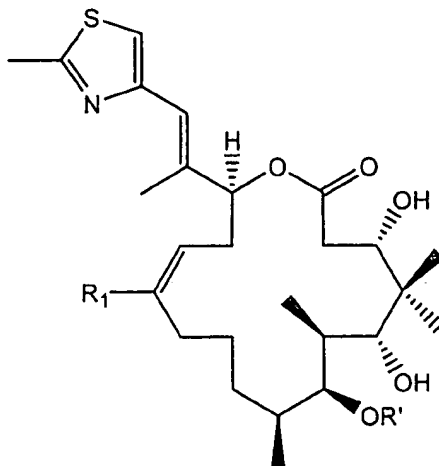
37. (Currently amended) A method of preparing a protected epothilone having the structure:



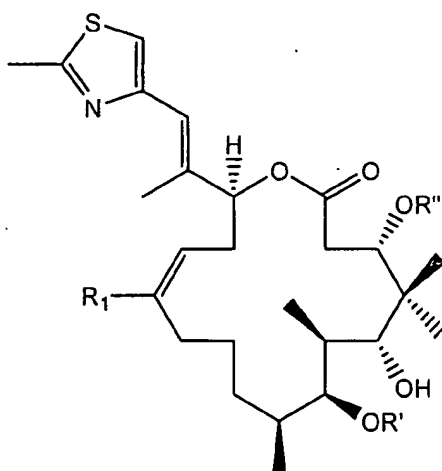
wherein R₁ is hydrogen or methyl; and

R' and R'' are independently hydrogen, a linear or branched alkyl, substituted or unsubstituted aryl or benzyl, trialkylsilyl, dialkyl-arylsilyl, alkyl-diarylsilyl, a linear or branched acyl, substituted or unsubstituted aroyl or benzoyl, which comprises:

(a) monoprotecting a cyclic diol having the structure:



under suitable conditions to form a cyclic alcohol having the structure:



and

- (b) oxidizing the cyclic alcohol formed in step (a) under suitable conditions to form the protected epothilone.

38. (Original) The method of claim 37 wherein R' and R'' are TBS.

39-59. (Cancelled)

60. (Previously presented) The method of claim 27, wherein step (a) comprises using a non-nucleophilic base.

61. (Previously presented) The method of claim 60, wherein the non-nucleophilic base is lithium diethylamide or lithium diisopropylamide.

62. (Previously presented) The method of claim 27, wherein step (a) is performed at subambient temperatures.

63. (Previously presented) The method of claim 27, wherein step (a) is performed at about -78 °C.

64. (Previously presented) The method of claim 28, wherein the catalyst is Grubbs's catalyst.
65. (Previously presented) The method of claim 37, wherein step (a) is performed in the presence of a base.
66. (Previously presented) The method of claim 65, wherein the base is 2,6-lutidine.
67. (Previously presented) The method of claim 37, wherein step (a) is performed in an inert organic solvent.
68. (Previously presented) The method of claim 67, wherein the solvent is dichloromethane.
69. (Previously presented) The method of claim 37, wherein step (a) is performed at subambient temperatures.
70. (Previously presented) The method of claim 37, wherein step (a) is performed at about -30 °C.
71. (Previously presented) The method of claim 37, wherein step (b) is performed using Dess-Martin periodinane in an inert organic solvent.
72. (Previously presented) The method of claim 71, wherein the solvent is dichloromethane.
73. (Previously presented) The method of claim 37, wherein step (b) is performed at 20-25 °C.